

JEE Main & JEE Advanced Complete Blueprint 2025

Exam Overview

JEE Main

- **Purpose:** Gateway to NITs, IITs, GFTIs, and qualification for JEE Advanced
- **Mode:** Computer-Based Test (CBT)
- **Sessions:** Multiple sessions per year (typically January & April)
- **Eligibility for JEE Advanced:** Top 2.5 lakh JEE Main qualifiers

JEE Advanced

- **Purpose:** Admission to IITs, ISM, and IISER
 - **Mode:** Computer-Based Test (CBT)
 - **Sessions:** Once per year (typically May/June)
 - **Eligibility:** Must qualify JEE Main
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JEE MAIN EXAM PATTERN

Paper 1 (B.E./B.Tech)

Total Questions: 75 Questions **Total Marks:** 300 Marks **Duration:** 3 Hours **Negative Marking:** -1 for wrong MCQs, No negative marking for numerical questions

Subject-wise Distribution:

Subject	Questions	Marks	Section Breakdown
Physics	25	100	20 MCQs + 5 Numerical
Chemistry	25	100	20 MCQs + 5 Numerical
Mathematics	25	100	20 MCQs + 5 Numerical

Question Format:

- **Section A:** 20 Multiple Choice Questions (4 marks each)
- **Section B:** 5 Numerical Value Answer Questions (4 marks each)
- All questions are compulsory (no optional questions)

JEE ADVANCED EXAM PATTERN

Paper Structure

Total Papers: 2 (Paper 1 & Paper 2) **Duration:** 3 hours each **Mode:** Computer-Based Test (CBT)

Total Marks: 360 marks (180 marks per paper)

Question Types:

- Multiple Choice Questions (Single Correct)
- Multiple Choice Questions (One or More Correct)
- Numerical Answer Type Questions
- Matching List Type Questions
- Assertion-Reasoning Type Questions

Subject Distribution per Paper:

Each paper contains questions from:

- Physics
- Chemistry
- Mathematics

Note: JEE Advanced doesn't follow a fixed pattern and can vary each year.

SUBJECT-WISE WEIGHTAGE ANALYSIS

JEE MAIN - Chapter-wise Weightage (Approximate)

PHYSICS (25 Questions - 100 Marks)

High Weightage Topics (6-8 questions):

- Mechanics (Kinematics, Laws of Motion, Work Energy Power)
- Electricity & Magnetism (Electrostatics, Current Electricity, Magnetic Effects)
- Modern Physics (Atoms, Nuclei, Dual Nature)
- Waves & Oscillations (Simple Harmonic Motion, Wave Motion)

Medium Weightage Topics (3-5 questions):

- Heat & Thermodynamics
- Optics (Ray Optics, Wave Optics)
- Rotational Motion
- Gravitation

Low Weightage Topics (1-2 questions):

- Properties of Solids and Liquids
- Kinetic Theory of Gases

- Electronic Devices

CHEMISTRY (25 Questions - 100 Marks)

High Weightage Topics (6-8 questions):

- Organic Chemistry (Hydrocarbons, Functional Groups, Biomolecules)
- Physical Chemistry (Chemical Kinetics, Equilibrium, Thermodynamics)
- Coordination Compounds
- Chemical Bonding

Medium Weightage Topics (3-5 questions):

- Periodic Table & Classification
- Electrochemistry
- p-Block Elements
- Aldehydes, Ketones & Carboxylic Acids

Low Weightage Topics (1-2 questions):

- Nuclear Chemistry
- Metallurgy
- Environmental Chemistry

MATHEMATICS (25 Questions - 100 Marks)

High Weightage Topics (6-8 questions):

- Calculus (Limits, Derivatives, Integrals, Application of Derivatives)
- Coordinate Geometry (Straight Line, Circle, Parabola, Ellipse, Hyperbola)
- Algebra (Complex Numbers, Quadratic Equations, Sequences & Series)

- Trigonometry & Inverse Trigonometric Functions

Medium Weightage Topics (3-5 questions):

- Vector Algebra & 3D Geometry
- Probability & Statistics
- Permutations & Combinations
- Matrices & Determinants

Low Weightage Topics (1-2 questions):

- Mathematical Reasoning
- Sets & Relations
- Binomial Theorem

JEE ADVANCED - Subject Weightage

Equal Distribution: Each subject (Physics, Chemistry, Mathematics) typically carries equal weightage across both papers, but the exact distribution varies each year.



MARKING SCHEME

JEE Main Marking

- **MCQs:** +4 for correct, -1 for incorrect, 0 for unattempted
- **Numerical Questions:** +4 for correct, 0 for incorrect/unattempted
- **Maximum Marks:** 300
- **Qualifying Percentile:** Varies (typically 75-90 percentile for different categories)

JEE Advanced Marking

- **Varies by Question Type:**
 - Single Correct MCQ: +3 for correct, -1 for incorrect
 - Multiple Correct MCQ: +4 for fully correct, partial marking available
 - Numerical Type: +3 for correct, 0 for incorrect
 - **Maximum Marks:** 360 (180 per paper)
 - **Minimum Marks Required:** Varies each year (typically 10-15% of maximum marks)
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STRATEGIC PREPARATION TIPS

For JEE Main

Time Management Strategy:

1. **Physics:** Aim to complete in 55-60 minutes
2. **Chemistry:** Aim to complete in 50-55 minutes
3. **Mathematics:** Utilize remaining 55-65 minutes
4. **Reserve 10-15 minutes** for review and marking answers

Subject-wise Approach:

Physics:

- Focus heavily on Mechanics and Electricity & Magnetism
- Practice numerical problems daily
- Use formula sheets for quick revision
- Understand concepts rather than rote learning

Chemistry:

- **Inorganic:** Create memory maps and mnemonics
- **Organic:** Focus on reaction mechanisms and name reactions
- **Physical:** Master numerical problem-solving
- Regular revision of facts and formulas

Mathematics:

- **Calculus:** Master integration techniques and applications
- **Coordinate Geometry:** Practice different types of curves
- **Algebra:** Focus on complex numbers and quadratic equations
- Daily practice of previous year questions

For JEE Advanced

Enhanced Strategy:

1. **Conceptual Depth:** Go beyond JEE Main level understanding
2. **Problem-solving Speed:** Practice complex multi-concept problems
3. **Time Per Question:** 2-3 minutes average per question
4. **Attempt Strategy:**
 - Easy questions first (build confidence)
 - Medium difficulty next
 - Difficult questions last (if time permits)

Advanced Preparation Tips:

- **Multiple Approaches:** Learn different methods for same problem

- **Cross-subject Integration:** Many questions combine multiple topics
 - **Assertion-Reasoning:** Practice this question type extensively
 - **Previous Year Analysis:** Study 10+ years of question papers
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CURRICULUM ALIGNMENT (NCERT + JEE)

Class 11 Topics (Foundation)

Physics: Units, Motion, Laws, Work Energy, Oscillations, Waves, Gravitation **Chemistry:** Basic Concepts, Atomic Structure, Classification, Bonding, Thermodynamics **Mathematics:** Sets, Relations, Functions, Trigonometry, Complex Numbers, Linear Inequalities

Class 12 Topics (Advanced)

Physics: Electricity, Magnetism, Optics, Modern Physics, Nuclei, Semiconductors
Chemistry: Solutions, Electrochemistry, Kinetics, d & f-block, Organic Chemistry **Mathematics:** Calculus, Vectors, 3D Geometry, Probability, Differential Equations

EXAM ADAPTATION STRATEGIES

Computer-Based Test (CBT) Tips:

1. **Screen Time Management:** Practice on computer screen to reduce eye strain
2. **Virtual Calculator:** Master the on-screen calculator for JEE Main
3. **Question Navigation:** Learn to use review features effectively
4. **Rough Work:** Practice organizing rough work systematically
5. **Time Display:** Keep track of remaining time frequently

Mock Test Strategy:

- **Frequency:** Take 2-3 mock tests per week
- **Analysis:** Spend equal time analyzing mistakes as taking the test
- **Weak Areas:** Identify and work on consistently weak topics
- **Speed Building:** Gradually reduce time per question through practice

Mental Preparation:

- **Stress Management:** Practice relaxation techniques
 - **Positive Mindset:** Focus on topics you know well first
 - **Backup Plans:** Have strategies for difficult questions
 - **Energy Management:** Plan your energy expenditure across 3 hours
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PREPARATION TIMELINE

For JEE Main (6-Month Strategy):

Months 1-2: Complete syllabus revision + concept clarity **Months 3-4:** Intensive problem solving + topic-wise tests

Months 5-6: Full-length mock tests + final revision

For JEE Advanced (After JEE Main):

Month 1: Advanced level problem solving + paper analysis **Month 2:** Multiple mock tests + weak area strengthening



FINAL SUCCESS MANTRAS

1. **Consistency > Intensity:** Regular study is better than sporadic intense sessions

2. **Quality > Quantity:** Focus on understanding rather than covering more topics
 3. **Analysis > Practice:** Analyzing mistakes is as important as solving questions
 4. **Revision > New Topics:** Multiple revisions are better than covering new topics close to exam
 5. **Health > Everything:** Maintain physical and mental health throughout preparation
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QUICK REFERENCE TABLE

Aspect	JEE Main	JEE Advanced
Total Questions	75	Varies (60-72)
Total Marks	300	360
Duration	3 Hours	6 Hours (3+3)
Papers	1	2
Attempt All	Yes	Yes
Negative Marking	Partial	Yes
Difficulty Level	Moderate	High
Success Rate	~40-50%	~8-10%

Remember: Success in JEE requires consistent effort, strategic preparation, and maintaining a positive mindset throughout the journey. Focus on your strengths while systematically improving your weak areas.

Good luck with your JEE preparation! 🍀